Reviewer’s report

Title: The association between tuberculin skin test result and active tuberculosis risk of college students in Beijing, China: a retrospective cohort study

Version: 0 Date: 05 May 2019

Reviewer: Sheng-Yuan Ruan

Reviewer's report:

This is a retrospective study based on the data of a TB screening program in China. The study aimed to evaluate the risk of active tuberculosis among college students with different cutoffs of tuberculin skin test (TST). This study question is important and is relevant to the audience of BMC Infectious Diseases. I have some comments for the authors.

Major comments:
1. Please provide the details about the follow-up plan for each individual receiving TST. Did the subjects with strong TST reaction receive more intensive follow-up? The information is important to understand whether there was detection bias. In addition, the number of lost to follow-up should be reported.
2. Please address your policy about the preventive therapy for latent TB infection (LTBI) during the study period. Was there any subject excluded from the analysis due to receiving LTBI treatment? If LTBI treatment was not suggested, what was the TST screening program for?
3. The information about the distribution of TST results should be provided, either in a table or a figure.
4. I suggest generating a graph to illustrate the relationship between the absolute risk of active tuberculosis and induration of TST (Y-axis: absolute risk or proportion of TB; X-axis: TST induration).

Minor comments:
1. I think the article title is a bit confusing. The authors could come up with a better one.
2. Abstract: The case number should be 67340 but not 67428 because active TB identified during screening should be excluded. Additionally, the number and incidence rate of incident TB during the follow-up period should be reported in the abstract. Hazard ratio alone does not provide sufficient information for decision making.
3. Abstract (the last two sentences): I have no idea about the meaning of "increased rapidly". Is there any statistics supporting this conclusion?
4. Table 1: I suggest removing the right second column to prevent misleading. The number listed in this column is prevalent case of TB during the screening but the right first column is the person-time of follow-up.
5. The reporting of statistical analysis requires some improvement. In general, P values larger than 0.01 should be reported to two decimal places, and those between 0.01 and 0.001 to three decimal places; P values smaller than 0.001 should be reported as P<0.001.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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